Wilhelm Roux's Archives of

Developmental Biology

Volume 192 1983

Editorial Board

R. Weber, Bern
Editor in Chief

K. Illmensee, Geneva
Editor for Rapid Communications

M. Ashburner, Cambridge
W. Engels, Tübingen
G. Freeman, Austin
C.F. Graham, Oxford
F.C. Kafatos, Cambridge, Mass.
K. Kratochwil, Salzburg
N. Le Douarin, Nogent-sur-Marne
E. Nakano, Nagoya
A.A. Neyfakh, Moscow
T.S. Okada, Kyoto
J. Postlethwait, Eugene
K. Sander, Freiburg, i.Br.
C.E. Sekeris, Athens
P. Sengel, Grenoble
H. Tiedemann, Berlin
C. Tocchini-Valentini, Rome
N.H. Verdonk, Utrecht
P. Wassarman, Boston

Springer-Verlag Berlin Heidelberg New York Tokyo
J.F. Bergmann Verlag München

Wilhelm Roux's Archives of Developmental Biology

The Archiv für Entwicklungsmechanik was founded in 1894 by *Wilhelm Roux.* Vols. 1–43 (1918) Leipzig, Engelmann. From Vol. 44 called Wilhelm Roux's Archiv für Entwicklungsmechanik der Organismen, Organ für die gesamte kausale Morphologie, Berlin, Springer, Vols. 52/97, in a transition volume in 1923. From Vol. 98 to Vol. 104, combined with the Archiv für mikroskopische Anatomie founded in 1864 [till 1876 (Vol. 13) edited by *M. Schulze,* Vol. 13, No. 4 to Vol. 35 (1890) edited by *La Valette St. George, W. Waldeyer,* Vols. 36 to 43 (1894) edited by *O. Hertwig, La Valette St. George, W. Waldeyer,* from Vol. 44 as Archiv für mikrobiologische Anatomie und Entwicklungsgeschichte. Vols. 77–95 (1910–1922) in two sections Bonn, Cohen]. From Vol. 96 Berlin, Springer. Vols. 98–104 (1925) combined with Roux's Archiv and again published separately from 1925 as Zeitschrift für Zellforschung, Vol. 2 and following. Vols. 105–130 as Zeitschrift für wissenschaftliche Biologie, Abteilung D, edited by *Wilhelm Roux, H. Speman, W. Vogt, B. Romeis.* From Vol. 131 (1933) under the single title. From Vol. 143 (1947) Berlin, Springer, and Munich, Bergmann. From Vol. 181 (1977) Heidelberg, Springer.

Submission of a manuscript implies that the work descriped has not been published before (except in the form of an abstract or as part of a published lecture, review or thesis), that it is not under consideration for publication elsewhere, that its publication has been approved by all the authors and by the responsible authorities – tacitly or explicitly – in the laboratories where the work was carried out and that, if accepted, it will not be published elsewhere in the same form, in either the same or another language, without the consent of the copyright holders. By submitting a manuscript, the authors agree that the copyright for their article is transferred to the publisher if and when the article is accepted for publication. The copyright covers the exclusive rights to reproduce and distribute the article, including reprints, photographic reproductions, microform, electronic data-base, video-disks, or any other reproductions of similar nature, and translations.

Photographic reproduction, microform, electronic data-base, video-disks, or any other reproduction of text, figures, or tables from this journal is prohibited without permission obtained from the publisher.

The use of general descriptive names, trade names, trade marks, etc., in this publication, even if the former are not specifically identified, is not to be interpreted as exempt from the relevant protective laws and regulations.

While the advice and information in this journal is believed to be true and accurate at the date of going to press, neither the authors nor the editors nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

Special Regulations for the USA

The Article Fee Code on the first page of an article in this journal indicates the copyright owner's consent that in the USA copies may be made for personal or internal use, provided the stated fee for copying beyond that permitted by Section 107 or 108 of the United States Copyright Law is paid through the *Copyright Clearance Center, Inc., 21 Congress Street, Salem, MA 01970, USA.*

If a code does not appear copies of the article may be made without charge, provided permission is obtained from the publisher.

The copyright owner's consent does not extend to copying for general distribution, for promotion, for creating new works, or for resale. Specific written permission must be obtained from the publisher for such copying.

Other Regulations

Authors of this journal can benefit from library and photocopy fees collected by VG WORT if certain conditions are met. If an author lives in the Federal Republic of Germany or in West Berlin it is recommended that he contact Verwertungsgesellschaft WORT, Abteilung Wissenschaft, Goethestrasse 49, D-8000 München 2, for detailed information.

Springer-Verlag Berlin Heidelberg New York
J.F. Bergmann Verlag, München

Printers: Universitätsdruckerei H. Stürtz AG Würzburg

© Springer-Verlag GmbH & Co. KG Berlin Heidelberg 1983

Printed in Germany

Contents Volume 192

Arnolds, W.J.A., Biggelaar, J.A.M. van den, Verdonk, N.H.: Spatial Aspects of Cell Interactions Involved in the Determination of Dorsoventral Polarity in Equally Cleaving Gastropods and Regulative Abilities of Their Embryos, as Studied by Micromere Deletions in *Lymnaea* and *Patella* . . . 75

Barbieri, F.D., s. Sánchez, S.S. . . . 37

Bebbington, C.R., s. Rizki, R.M., et al. . . . 1

Beetschen, J.-C., s. Gautier, J. . . . 196

Berking, S.: The Fractionation of a *Hydra*-Derived Inhibitor into Head and Foot Inhibitors may be an Artefact . . . 327

Berking, S., Schindler, D.: Specification of the Head-Body Proportion in *Hydra attenuata* Regenerating the Head 333

Biggelaar, J.A.M. van den, s. Arnolds, W.J.A., et al. . . . 75

Biggelaar, J.A.M. van den, s. Dorresteijn, A.W.C. et al. . . . 262

Bleasby, A.J., s. Milner, M.J., et al. . . . 164

Bock, S.G., Tiemeier, D.C., Mester, K., Goldsmith, M.R.: Differential Patterns in the Temporal Expression of *Bombyx mori* Chorion Genes . . . 222

Born, J., s. John, M., et al. . . . 45

Boterenbrood, E.C., Narraway, J.M., Hara, K.: Duration of Cleavage Cycles and Asymmetry in the Direction of Cleavage Waves Prior to Gastrulation in *Xenopus laevis* 216

Bournias-Vardiabasis, N., Buzin, C.H., Reilly, J.G.: The Effect of 5-Azacytidine and Cytidine Analogs on *Drosophila melanogaster* Cells in Culture (Rapid Communication) . . . 299

Brown, L.A., s. Johnson, T.K., et al. . . . 103

Bryant, P.J., s. O'Brochta, D. . . . 285

Büning, J.: Changes of RNA Precursor Pools (ATP, UTP) during Embryogenesis of *Drosophila melanogaster* (Diptera) and *Bruchidius obtectus* (Coleoptera) . . . 159

Bürki, K., s. Petzoldt, U., et al. . . . 138

Buzin, C.H., s. Bournias-Vardiabasis, N., et al. . . . 299

Campos-Ortega, J.A.: Topological Specificity of Phenotype Expression of Neurogenic Mutations in *Drosophila* . . . 317

Campos-Ortega, J.A., s. Lehmann, R., et al. . . . 62

Costlow, J.D., s. Freeman, J.A. . . . 362

Dellas, K., s. Margaritis, L.H., et al. . . . 303

Demarchez, M., s. Mauger, A., et al. . . . 205

Denèfle, J.-P., Goudeau, H., Lechaire, J.-P.: Influence of a Transepithelial NaCl Gradient on the Moulting Cycle, Keratinization and Active Sodium Transport of Isolated Frog Skin Cultured with or without Aldosterone . . . 234

Denell, R.E., s. Johnson, T.K., et al. . . . 103

Dhouailly, D.: Early Events in Retinoic Acid-Induced Ptilopody in the Chick Embryo . . . 21

Dietrich, U., s. Lehmann, R., et al. . . . 62

Dohmen, M.R., s. Speksnijder, J.E. . . . 248

Dorresteijn, A.W.C., Wagemaker, H.A., Laat, S.W. de, Biggelaar, J.A.M. van den: Dye-Coupling between Blastomeres in Early Embryos of *Patella vulgata* (Mollusca, Gastropoda). Its Relevance for Cell Determination . . . 262

Druguet, M., s. Mauger, A., et al. . . . 205

Dübendorfer, A., s. Sánchez, L. . . . 48

Duspiva, F., s. Wiemann-Weiss, D., et al. . . . 53

Ekblom, P., s. Lehtonen, E., et al. . . . 145

Emmerich, H., s. Wiemann-Weiss, D., et al. . . . 53

Eppenberger, H.M., s. Weber, F., et al. . . . 200

Epper, F.: Three-Dimensional Fate Map of the Female Genital Disc of *Drosophila melanogaster* . . . 270

Epper, F.: The Evagination of the Genital Imaginal Discs of *Drosophila melanogaster*. I. Morphogenesis of the Female Genital Disc . . . 275

Epper, F.: The Evagination of the Genital Imaginal Discs of *Drosophila melanogaster*. II. Morphogenesis of the Intersexual Genital Disc of the Mutant *doublesex-dominant* (dsx^D) . . . 280

Foidart, J.-M., s. Mauger, A., et al. . . . 205

Franke, H.-D.: Endocrine Mechanisms Mediating Light-Temperature Effects on Male Reproductive Activity in *Typosyllis prolifera* (Polychaeta, Syllidae) . . . 95

Freeman, J.A., Costlow, J.D.: Endocrine Control of Spine Epidermis Resorption during Metamorphosis in Crab Larvae (Rapid Communication) . . . 362

Fuke, M.T.: Self and Non-Self Recognition between Gametes of the Ascidian, *Halocynthia roretzi* . . . 347

Gautier, J., Beetschen, J.-C.: Inhibition of Protein Synthesis Elicits Early Grey Crescent Formation in the Axolotl Oocyte (Rapid Communication) . . . 196

Goldsmith, M.R., s. Bock, S.G., et al. . . . 222

Goudeau, H., s. Denèfle, J.-P., et al. . . . 234

Grimaud, J.-A., s. Mauger, A., et al. . . . 205

Grunz, H.: Change in the Differentiation Pattern of *Xenopus laevis* Ectoderm by Variation of the Incubation Time and Concentration of Vegetalizing Factor . . . 130

Hara, K., s. Boterenbrood, E.C., et al. . . . 216

Hartmann, D.J., s. Mauger, A., et al. . . . 205

Herbage, D., s. Mauger, A., et al. . . . 205

Honegger, T.G.: Ultrastructural and Experimental Investigations of Sperm-Egg Interactions in Fertilization of *Hydra carnea* . . . 13

Hoppe, P., s. John, M., et al. . . . 45

Illmensee, G.R., s. Petzoldt, U., et al. . . . 138

Illmensee, K., s. Petzoldt, U., et al. . . . 138

Ishizuya-Oka, A.: Electron Microscopical Study of Self-Differentiation Potency in the Chick Embryonic Endoderm Cultured in vitro . . . 171

Jacobs-Lorena, M., s. Ruddell, A. . . . 189

Jalanko, H., s. Lehtonen, E., et al. . . . 145

Janeczek, J., s. John, M., et al. . . . 45

Janning, W., Labhart, C., Nöthiger, R.: Cell Lineage Restrictions in the Genital Disc of *Drosophila* Revealed by *Minute* Gynandromorphs . . . 337

Jerka-Dziadosz, M.: The Origin of Mirror-Image Symmetry Doublet Cells in the Hypotrich Ciliate *Paraurostyla weissei* . . . 179

Jiménez, F., s. Lehmann, R., et al. . . . 62

John, M., Janeczek, J., Born, J., Hoppe, P., Tiedemann, H., Tiedemann, H.: Neural Induction in Amphibians. Transmission of a Neuralizing Factor (Rapid Communication) 45

Johnson, T.K., Brown, L.A., Denell, R.E.: Changes in Cell Surface Proteins of Cultured *Drosophila* Cells Exposed to 20-Hydroxyecdysone (Rapid Communication) . . . 103

Kärner, J., s. Neuman, T., et al. . . . 42

Kalantzi, M.Ch., s. Margaritis, L.H., et al. . . . 303

Kalthoff, K., s. Ripley, S. . . . 353

Kambysellis, M.P., s. Margaritis, L.H., et al. . . . 303

Kanéda, T., Suzuki, A.S.: Studies on the Formation and State of Determination of the Trunk Organizer in the Newt, *Cynops pyrrhogaster*. IV. The Association of the Neural-Inducing Activity with the Mesodermization of the Trunk Organizer . . . 8

Kawamura, K., Watanabe, H.: The Role of Parental Positional Information in the Determination of Antero-Posterior Polarity during Palleal Budding in Ascidians . . . 28

Keino, H., s. Takesue, S., et al. . . . 113

Kondoh, H., Takagi, S., Nomura, K., Okada, T.S.: Transdifferentiation of Putative Neuronal Cells of Neural Retina into Lens: A Demonstration by Chick-Quail Chimeric Cultures . . . 256

Kostović, I., s. Kračun, I., et al. . . . 108

Kračun, I., Rösner, H., Kostović, I., Rahmann, H.: Areal and Laminar Distribution of Gangliosides in the Fetal Human Neopallium at 28 Weeks of Gestation (Rapid Communication) . . . 108

Laasberg, T., s. Neuman, T., et al. 42
Laat, S.W. de, s. Dorresteijn, A.W.C., et al. 262
Labhart, C., s. Janning, W., et al. 337
Laitinen, L., s. Lehtonen, E., et al. 145
Lechaire, J.-P., s. Denèfle, J.-P., et al. 234
Lehmann, R., Jiménez, F., Dietrich, U., Campos-Ortega, A.: On the Penotype and Development of Mutants of Early Neurogenesis in *Drosophila melanogaster* 62
Lehtonen, E., Jalanko, H., Laitinen, L., Miettinen, A., Ekblom, P., Saxén, L.: Differentiation of Metanephric Tubules Following a Short Transfilter Induction Pulse 145
Lezzi, M., s. Weber, F., et al. 200
Mähr, R., s. Weber, F., et al. 200
Margaritis, L.H., Dellas, K., Kalantzi, M.Ch., Kambysellis, M.P.: The Eggshell of Hawaiian *Drosophila*: Structural and Biochemical Studies in *D. grimshawi* and Comparison to *D. melanogaster* 303
Mauger, A., Demarchez, M., Herbage, D., Grimaud, J.-A, Druguet, M., Hartmann, D.J., Foidart, J.-M., Sengel, P.: Immunofluorescent Localization of Collagen Types I, III, IV, Fibronectin and Laminin during Morphogenesis of Scales and Scaleless Skin in the Chick Embryo . . . 205
Mester, K., s. Bock, S.G., et al. 222
Meyer, B., s. Weber, F., et al. 200
Miettinen, A., s. Lehtonen, E., et al. 145
Milner, M.J., Bleasby, A.J., Pyott, A.: The Role of the Peripodial Membrane in the Morphogenesis of the Eye-Antennal Disc of *Drosophila melanogaster* 164
Narraway, J.M., s. Boterenbrood, E.C., et al. 216
Neuman, T., Laasberg, T., Kärner, J.: Ultrastructural Localization of Adenylate Cyclase and cAMP Phosphodiesterase in the Gastrulating Chick Embryo (Rapid Communication) 42
Nöthiger, R., s. Janning, W., et al. 337
Nomura, K., s. Kondoh, H., et al. 256
O'Brochta, D., Bryant, P.J.: Cell Degeneration and Elimination in the Imaginal Wing Disc, Caused by the Mutations *Vestigial* and *Ultravestigial* of *Drosophila melanogaster* 285
Okada, T.S., s. Kondoh, H., et al. 256
Onitake, K., s. Takesue, S., et al. 113
Petzoldt, U., Bürki, K., Illmensee, G.R., Illmensee, K.: Protein Synthesis in Mouse Embryos with Experimentally Produced Asynchrony Between Chromosome Replication and Cell Division 138
Pyott, A., s. Milner, M.J., et al. 164
Rahmann, H., s. Kračun, I., et al. 108
Reilly, J.G., s. Bournias-Vardiabasis, N., et al. 299
Render, J.A.: The Second Polar Lobe of the *Sabellaria cementarium* Embryo Plays an Inhibitory Role in Apical Tuft Formation 120
Ripley, S., Kalthoff, K.: Changes in the Apparent Localization of Anterior Determinants during Early Embryogenesis (*Smittia* spec., Chironomidae, Diptera) 353
Rizki, R.M., Rizki, T.M., Bebbington, C.R., Roberts, D.B.: *Drosophila* Larval Fat Body Surfaces. Changes in Transplant Compatibility during Development 1
Rizki, T.M., s. Rizki, R.M., et al. 1
Roberts, D.B., s. Rizki, R.M., et al. 1
Rösner, H., s. Kračun, I., et al. 108
Ruddell, A., Jacobs-Lorena, M.: Abrupt Decline in the Rate of Accumulation of Total Protein and Yolk in Postvitellogenic Egg Chambers of *Drosophila* 189
Sánchez, L., Dübendorfer, A.: Development of Imaginal Discs from Lethal Hybrids between *Drosophila melanogaster* and *Drosophila mauritiana* (Rapid Communication) 48
Sánchez, S.S., Barbieri, F.D.: Developmental and Biochemical Alterations Caused by Tunicamycin in *Bufo arenarum* Embryos 37
Saxén, L., s. Lehtonen, E., et al. 145
Schaap, P.: Quantitative Analysis of the Spatial Distribution of Ultrastructural Differentiation Markers during Development of *Dictyostelium discoideum* 86
Scheller, K., s. Schenkel, H. 152
Schenkel, H., Scheller, K.: Ecdysteroids Regulate the Synthesis of RNA Polymerase Molecules in Fat Body Cells of *Calliphora* Larvae 152
Schindler, D., s. Berking, S. 333
Schüpbach, P.M., Went, D.F.: Cell Fusions during Formation of the Oocyte-Nurse Chamber Complex in the Ovary of the Dipteran Insect *Mycophila speyeri* 228
Sengel, P., s. Mauger, A., et al. 205
Sin, F.Y.T.: Effect of 20-Hydroxyecdysone on Protein Synthesis in Wing Discs of *Drosophila melanogaster* . . . 366
Speksnijder, J.E., Dohmen, M.R.: Local Surface Modulation Correlated with Ooplasmic Segregation in Eggs of *Sabellaria alveolata* (Annelida, Polychaeta) 248
Suzuki, A.S., s. Kanéda, T. 8
Takagi, S., s. Kondoh, H., et al. 256
Takesue, S., Onitake, K., Keino, H., Takesue, Y.: Immunocytochemical Location of Vitellin in the Egg of the Silkworm, *Bombyx mori*, during Early Developmental Stages 113
Takesue, Y., s. Takesue, S., et al. 113
Tiedemann, H., s. John, M., et al. 45
Tiedemann, H., s. John, M., et al. 45
Tiemeier, D.C., s. Bock, S.G., et al. 222
Verdonk, N.H., s. Arnolds, W.J.A., et al. 75
Vogel, O.: Test for Intercalary Regeneration of the Metameric Pattern of the Leafhopper *Euscelis plebejus* Fall. (Homoptera) (Rapid Communication) 295
Wagemaker, H.A., s. Dorresteijn, A.W.C., et al. 262
Watanabe, H., s. Kawamura, K. 28
Weber, F., Mähr, R., Meyer, B., Eppenberger, H.M., Lezzi, M.: Cell-Free Translation of Balbiani Ring RNA (75S) of *Chironomus tentans* Salivary Glands into High Molecular Weight Products (Rapid Communication) 200
Went, D.F., s. Schüpbach, P.M. 228
Wiemann-Weiss, D., Emmerich, H., Duspiva, F.: Immunofluorescent Distribution of Postribosomal Particles during Oogenesis and Early Development of an Insect (*Dysdercus intermedius*, Heteroptera, Pyrrhoc.) 53

Indexed in Current Contents